

SOIL CONSERVATION SERVICE

KENTUCKY

STANDARD AND SPECIFICATIONS
FOR
SEDIMENT BASIN

(350)

Definition

A barrier or dam constructed across a waterway or at other suitable locations to form a silt or sediment basin.

Purpose

To preserve the capacity of reservoirs, ditches, canals, diversions, waterways and streams and to prevent undesirable deposition on bottom lands by providing basins for the deposition and storage of silt, sand, gravel, stone and other detritus.

Conditions Where Practice Applies

This practice applies where physical conditions or land ownership preclude the adequate treatment of the sediment source by the installation of erosion control measures to keep soil and soil material in place during the planned useful life of the structure.

Design and Construction Specifications

The minimum capacity of a sediment basin shall equal the volume of sediment expected to be trapped at the site during a period of 15 years or the planned useful life of the improvements it is designed to protect, whichever is the greater. Where it is determined that periodic removal of debris will be practicable, the capacity may be proportionately reduced.

The sediment volume shall be determined by an SCS geologist, except for sediment basins designed in accordance with the standard for the Pond practice in the Jackson Purchase. The sediment volume for sediment basins using farm pond design criteria in the Jackson Purchase will be computed as follows:

1. Divide the sediment basin watershed area into gully area and the area subject to sheet erosion.
2. Multiply the gully area (acre) by 1.68.
3. Multiply the area subject to sheet erosion (acre) by 0.0645.
4. The 15-year volume of sediment in acre-feet is the sum of the products of Step 2 and Step 3.

The design of dams, spillways, and drainage facilities shall be in accordance with standards for the Pond, Grade Stabilization Structure, and Floodwater Retarding Structure practices, or the Engineering Manual, as appropriate for the class and kind of structure being considered.

Specifications shall be in keeping with the preceding standard and the other requirements included by reference, except that sediment basins designed using the Pond practice design criteria will not require the installation of trough or tank pipelines, etc., for watering livestock. However, when sediment basins are to serve a secondary purpose of furnishing livestock water, irrigation water, etc., the capacity of the permanent water storage will be the sum of the volume of sediment and the volume required for the secondary purpose; and, all facility requirements of the secondary purpose shall be provided.

The specifications shall describe the other requirements for proper installation of the practice to achieve its intended purpose including the establishment of vegetation, which will be in accordance with the specifications for the Pond practice Code 378.

The design and specifications shall be approved in accordance with the Engineering Job Classification Approval Authority of the responsible individual.